

6. The artificial yellow product has not yet been obtained in a pure condition, but it may be so far purified as to exhibit clearly all the general properties of the natural pigment.

7. The natural pigment as prepared for analysis is shown to be almost certainly a chemical individual. Its probable constitution is discussed.

8. It is shown that this yellow substance (denominated in the paper "Lepidotie acid"), together with a closely allied red substance, will account for all the chemical pigmentation of the wing scales of the coloured Pieridæ, though modifications may be produced by superadded optical effects. The black pigment found in the group is not dealt with in the paper.

9. The described uric acid derivatives, though universal in the Pieridæ, are apparently confined to this group among the Rhopalocera. This fact enables the interesting observation to be made, that where a Pierid mimics an insect belonging to another family, the pigments in the two cases are chemically quite distinct. This is well seen in the genera *Leptalis* and *Mechanitis* respectively.

10. The existence of pigments other than scale-pigments is for the first time described; substances, namely, which are found between the wing membranes, and which, in certain genera, are the basis of ornament.

11. The fact that the scale-pigments are really the normal excretory products of the animal used in ornament, is emphasised by the observation that the yellow Pierids, on emergence from the chrysalis, are apt to void from the rectum a quantity of uric acid coloured by a yellow substance which exactly resembles the pigment of the wing.

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#### GYMNOPLEURUS: CORRECTION OF NOMENCLATURE.

By JOHN W. SHIPP.

GYMNOPLEURUS, Illiger.

*Modestus*, Lansberge, Notes, Leyden Mus. 8, p. 72, 1886.

*Peringueyi*, mihi = *modestus*, Pery, Tr. Sth. Afr. Phil. Soc. iv. p. 94, 1888.

*Peringueyi*, Shipp (*modestus*, Pery nec Lansb.). — Nigro-cyanaceous, opaque. Head granulose, a little broader than long, rounded at base, produced angularly laterally, and with an acute ridge on each side; clypeus with the outer margin slightly reflexed, deeply emarginated in the centre, which thus forms two moderately acute teeth; antennæ black. Prothorax convex, once and a half broader than long, with the sides rounded and slightly angulated in the centre, marginated and finely granulose,

without any lateral fovea. Elytra finely granulose, strongly developed at the shoulders, deeply striated. Pygidium depressed, carinated at base, and deeply shagreened. Under side very dark blue, shagreened; anterior femora with a median tooth underneath; anterior tibiæ tridentate.

Hab. Beaufort West, Cape Colony. Long. corp. 12–13 mm., lat. 6 mm. Type in Sth. Afr. Mus.

*Modestus*, Lansb.—“Obscure rubro-cupreus, supra rugulosus, clypeo bidentato, thorace obsolete lineato, elytris obsolete striatis, sinu laterali valde profundo.” Long. corp. 8–12 mm.

Hab. Benguela.

I may mention that Peringuey's description was read on March 31st, 1886, the same year as Lansberge described his species.

*G. modestus* is very closely allied to *G. cupreus*, Boh., but is more brilliant, and more distinctly granulated.

Oxford, 1894.

## SPILOSOMA LUBRICIPEDA AND ITS VARIETIES IN YORKSHIRE, DURHAM, LINCOLNSHIRE, &c.\*

BY W. HEWETT.

I HOPE that the following particulars, obtained from many sources and from a careful examination of most of the Yorkshire and Durham collections (not merely once, but often on two or three occasions), will tend to throw a little light on this somewhat dark question, which has already been discussed at some length by Messrs. Porritt, South, and Tugwell (Entom. xxvi. 247, 257, 296, 346; xxvii. 129, 205). The type of *S. lubricipeda* is generally distributed, and, I believe, common in most localities, although, like many other species, it occurs in much greater abundance in some seasons than in others. Mr. Finlay, of Meldon Park, Morpeth, when looking over my collection a short time ago, informed me that the species is rare in all stages in the neighbourhood of Morpeth. The larvæ, when full-fed and about to pupate, are not by any means particular in the choice of their abode—such unlikely places as old kettles, pots and pans of all descriptions, pieces of brown paper, newspaper, old rags, the stalk of a cabbage, or in the pithy branches of the elder; and I have heard of from twelve to sixteen cocoons being taken from one cabbage-stump. The egg, larva, pupa, and the ordinary forms of the imago are too well known to need any description, so I will at once proceed to the chief feature of this paper, viz.,

\* Abstract of a Paper read before the Lancashire and Cheshire Entomological Society, Nov. 12th, 1894.